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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,183

09/25/2006

Kyeong-Keun Kim

SHIN-0052

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23413 7590 10/03/2008  
CANTOR COLBURN, LLP  
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EXAMINER

MARC, MCDIEUNEL

ART UNIT

PAPER NUMBER

3664

NOTIFICATION DATE

DELIVERY MODE

10/03/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

usptopatentmail@cantorcolburn.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/594,183	<b>Applicant(s)</b> KIM, KYEONG-KEUN	
	<b>Examiner</b> MCDIEUNEL MARC	<b>Art Unit</b> 3664	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 September 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 9/25/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

1. Claims 1-16 are pending.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 6-8, 10-12 and 14-15 as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Breed et al. (US 20060208169 A1) in view of Okamoto (US 20010000010 A1).

As per claims 1, 4, 8 and 12, **Breed et al.** as best understood teaches substantially a vehicular system navigation system for a position self control robot including a main body having a locomotion unit, the navigation system (see section [0271]), applying the absolute coordinates to a programmed locomotion algorithm, and controlling the locomotion unit to move the main body (see page 125, particularly the tables and sections [2107-2125]); as to a floor material (see fig. 5, which being considered a floor material); for providing absolute coordinate information to enable a position self control robot to recognize absolute coordinates in a move space (see sections [0001, 0004 and 0005], a plurality of two-dimensional (2D) barcodes printed

Art Unit: 3664

on a surface thereof at predetermined intervals, the 2D barcodes respectively having different unique coordinate values (see figs. 2A, 2B, wherein the dotted part of element 3' being taken as having different unique coordinate values based on how they are placed from each other); the control unit recognizing absolute coordinates within a predetermined area, which are stored in memory (see sections [0499, 0538]). Breed et al. does not specifically teach two-dimensional (2D) barcodes formed at predetermined intervals on a floor having a predetermined size, the 2D barcodes respectively having different unique coordinate values; a barcode reader installed at a predetermined position in a lower portion of the main body to read a 2D barcode on the floor; and a control unit installed at the main body to be electrically connected with the barcode reader, the control unit recognizing absolute coordinates within a predetermined area, which are stored in memory, based on a unique coordinate value of the 2D barcode read by the barcode reader.

**Okamoto** teaches a code reader two-dimensional (2D) barcodes formed at predetermined intervals on a floor having a predetermined size, the 2D barcodes respectively having different unique coordinate values; a barcode reader installed at a predetermined position in a lower portion of the main body (see figs. 2A, 2B, wherein element 3' being considered as having equal intervals) to read a 2D barcode on the floor (placing barcode on the floor being taken as design choice); and a control unit installed at the main body to be electrically connected with the barcode reader (see section [0002], having a control electronically conned to a main body being taken as design choice, also connected to a barcode reader fall under the same design choice, wherein the power supply of vehicle provides electricity to every single component that requires electricity), based on a unique coordinate value of the 2D barcode read by the barcode reader (see abstract).

Art Unit: 3664

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of Breed et al. with the barcode teaching of Okamoto, because this modification would have increased Breed's et al. teaching so that barcode system could be introduced into the vehicle system, thereby improving the usability and the reliability of the navigation system.

As per claim 2, **Breed et al.** teaches a vehicle that further comprising a light emitting device (see sections [0165 and 0221]), installed near the barcode reader to emit light having a predetermined wavelength range to the floor (see fig. 5, wherein placing the light near the barcode reader to the floor has been taken as design choice, for instance instead of projecting the light into the operator's it could have been projected to the floor instead).

With respect to claim 3, wherein a light emitting device emits light having a wavelength range between 300 nm and 850 nm (falls under design choice, therefore does not contain any patentable weight).

As per claims 6, 10 and 14, **Okamoto** teaches a code reader wherein the 2D barcodes are arranged at equal intervals in a matrix pattern (see figs. 2A, 2B, wherein element 3' being used pictorially as matrix pattern).

As per claims 7 and 15, **Okamoto** teaches a code reader wherein the 2D barcodes are arranged at equal intervals along a plurality of concentric circles (see figs. 2A, 2B and section [0001]).

Art Unit: 3664

As per claim 11, **Okamoto** teaches a code reader wherein the second sheets are arranged at equal intervals along a plurality of concentric circles (see figs. 2A, 2B, wherein element 3' being considered as having equal intervals).

4. Claims 5, 9, 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breed et al. in view Okamoto as applied to claims 4, 8 and 12 above, and further in view of Honerkamp (US 20020001473 A1).

As per claims 5, 9, 13 and 16, **Breed et al.** in view **Okamoto** as best understood teach essential features substantially as claimed with the exception of the limitations below as taught by Honerkamp.

**Honerkamp** in the other hand teaches a barcode wherein the 2D barcodes are printed using one of visible color ink and invisible secret ink (see sections [0013, 0014], wherein in order to print ink is required and having color ink falls under design choice); a coating sheet that is made of a transparent material and is bonded to the surface on which the 2D barcodes are printed (see fig. 1).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of Breed et al. and Okamoto with the visible ink of Honerkamp, because this modification would have increased Breed's et al. and Okamoto's teaching so that visible ink could be introduced into the vehicle system, thereby improving the vehicle and the reliability of the navigation system.

Art Unit: 3664

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MCDIEUNEL MARC whose telephone number is (571)272-6964. The examiner can normally be reached on 6:30-5:00 Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Khoi Tran can be reached on (571) 272-6919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

**/McDieunel Marc/**

Examiner, Art Unit 3664

Wednesday, September 24, 2008

**/KHOI TRAN/**

Supervisory Patent Examiner, Art Unit 3664